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What Is Claimed Is:

1. An image sensor with improved uniformity of effective incident light, comprising:

a chip having a plurality of sensing areas being capable of receiving incident radiation and a stacked transmission layer covering the sensing areas; and

a plurality of microlenses covering the stacked transmission layer, the size of each microlens being a function of the distance between the microlens to a chip center.

2. The image sensor with improved uniformity of effective incident light of claim 1, wherein the sizes of the microlenses are altered based on the distance between the microlenses to the chip center such that the photoenergies received by the sensing areas are more uniform.

3. The image sensor with improved uniformity of effective incident light of claim 1, wherein the size of each microlens increases as the distance from the microlens to the chip center increases.

4. The image sensor with improved uniformity of effective incident light of claim 3, wherein the microlenses disposed in the edge region are kept at an original size.

5. The image sensor with improved uniformity of effective incident light of claim 4, wherein the size of the microlenses disposed in the center region is reduced by 5-50

& compared with the size of the microlenses disposed in the edge region.

6. The image sensor with improved uniformity of effective incident light of claim 5, wherein the size of the microlenses disposed in chip center is reduced by about 20 % compared with the size of the microlenses disposed in the chip edge.

7. The image sensor with improved uniformity of effective incident light of claim 1, wherein the sizes of the microlenses are progressively increasing from the chip center to a chip edge such that the brightness in different regions of the chip is balanced.

8. The image sensor with improved uniformity of effective incident light of claim 7, wherein the difference between the sizes of the microlenses disposed in the chip center and in the chip edge is 5-50%.

9. The image sensor with improved uniformity of effective incident light of claim 8, wherein the difference between the sizes of the microlenses disposed in the chip center and in the chip edge is about 20%.

10. The image sensor with improved uniformity of effective incident light of claim 1, wherein the microlenses are divided into a plurality of groups, and the size of the microlenses in each group is constant.

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11. A device comprising an image sensor of claim 1 embedded therein.

12. An image sensor with improved uniformity of effective incident light, comprising:

a chip having a plurality of sensing areas being capable of receiving incident radiation;

a plurality of color filter units corresponding to each sensing area and disposed overlying the sensing areas; and

a plurality of microlenses overlying the color filter units, the distance between a center of the microlens and a center of the corresponding sensing area being a function of the distance between the corresponding sensing area to a chip center, each microlens overlying its corresponding color filter unit without overlying adjacent regions thereof.

13. The image sensor with improved uniformity of effective incident light of claim 12, wherein the distance between the center of each microlens and the center of the corresponding sensing area is altered based on the distance between the corresponding sensing area to a chip center such that the photoenergies received by the sensing area are more uniform.

14. The image sensor with improved uniformity of effective incident light of claim 12, wherein the distance

between the center of the microlens and the center of the corresponding sensing area increases as the distance between the corresponding sensing area to the chip center increases such that the brightness in different regions of the chip is balanced.

15. The image sensor with improved uniformity of effective incident light of claim 12, wherein the microlenses are divided into a plurality of groups, and the microlenses in each group have a corresponding constant distance between the center of the microlenses and the center of the sensing area.

16. The image sensor with improved uniformity of effective incident light of claim 15, wherein the groups at least comprise a first group and a second group adjacent to the first group, the first group closer the chip center than the second group, wherein the microlenses in the second group are shifted by decreasing a gap between two adjacent microlenses belonging to the first and second groups while the other microlenses in the second group are shifted without decreasing the gaps there between, and the color filter units are shifted by reducing the size of the color filter unit belonging to the second group adjacent to another color filter unit belonging to the first group while the other color filter units in the second group are shifted without reducing their sizes.

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1 17. The image sensor with improved uniformity of
2 effective incident light of claim 15, wherein each group
3 comprises at least two sensing areas.

1 18. The image sensor with improved uniformity of
2 effective incident light of claim 12, further comprising an
3 IC transparent stacked layer between the sensing areas and
4 the color filter units.

1 19. A device comprising an image sensor of claim 12
2 embedded therein.

1 20. An image sensor built in a chip, comprising:
2 a semiconductor substrate;
3 a plurality of sensing areas being capable of receiving
4 incident radiation formed in the semiconductor
5 substrate;
6 a plurality of color filter units corresponding to each
7 sensing area and disposed overlying the sensing
8 areas; and
9 a plurality of microlenses overlying the color filter
10 units, the distance between a center of the
11 microlens and a center of the corresponding
12 sensing area being a function of the distance
13 between the corresponding sensing area to a chip
14 center, each microlens overlying its
15 corresponding color filter unit without overlying
16 adjacent regions thereof.

21. The image sensor of claim 20, wherein the distance between the center of each microlens and the center of the corresponding sensing area is altered based on the distance between the corresponding sensing area to a chip center such that the photoenergies received by the sensing area are more uniform.

22. The image sensor 20, wherein the distance between the center of the microlens and the center of the corresponding sensing area increases as the distance between the corresponding sensing area to the chip center increases.

23. The image sensor of claim 20, wherein the microlenses are divided into a plurality of groups, and the microlenses in each group have a corresponding constant distance between the center of the microlenses and the center of the sensing area.

24. An image sensor built in a chip, comprising:

a semiconductor substrate;

a plurality of sensing areas being capable of receiving incident radiation formed in the semiconductor substrate;

a stacked transmission layer covering the sensing areas; and

a plurality of microlenses covering the stacked transmission layer, the size of each microlens being a function of the distance between the microlens to a chip center.

25. The image sensor of claim 24, wherein the sizes of the microlenses are altered based on distance between the microlenses to the chip center such that the photoenergies received by the sensing areas are more uniform.

26. The image sensor of claim 25, the size of each microlens increases as the distance between the microlens to the chip center increases.

27. The image sensor of claim 24, wherein the microlenses are divided into a plurality of groups, and the microlenses in each group have a corresponding constant size.